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# Workplan: Mercury Variance Workgroup

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## Introduction

Mercury is a toxic metal that has high bioconcentration and bioaccumulation rates. When mercury combines with carbon, the compounds formed are called “organic” mercury compounds or organomercurials. The most common organic mercury compound in the environment is methylmercury, which is the predominant mercury species found in fish tissue. Mercury is the major cause of the issuance of fish consumption advisories in Indiana.

EPA developed a new mercury analytical method (Method 1631) in 1999 that can measure the concentration of mercury at a level below Indiana's aquatic life, human health, and wildlife water quality criteria. Until this new method became available, laboratory analysis could only measure mercury at a level well above these water quality criteria.

Based on limited fish tissue and in-stream water quality sampling, the concentration of mercury that exists in many of Indiana's surface waters exceeds water quality criteria. Additionally, all of Indiana's surface waters contain fish consumption advisories due to mercury. A fish consumption advisory for mercury is based on the Food and Drug Administration's (FDA) action level of 1 mg/kg. It is important to note that not every fish, in every surface water body, is collected and analyzed for mercury. The fish consumption advisory is based on a statistically significant sample population of fish collected from throughout the state, which have met or exceeded this FDA action level.

Prior to the existence of the EPA's Method 1631, OWQ was less able to effectively implement compliance requirements with very low-level mercury limitations because the analytical methods that existed then were not capable of measuring to the level of the limitations. Now that the new mercury method is available, OWQ is working to devise a permitting approach that will assist in reducing mercury loadings.

## The Problem

Information available within Indiana and nationally suggests that a significant number of wastewater discharges may require water quality-based effluent limits (WQBELs) for mercury. Information obtained by IDEM suggests that mercury pollution minimization efforts may have a certain amount of effectiveness but also suggests that such efforts may not be enough to meet the most stringent mercury WQBELs. It also appears that the number of facilities that will need mercury limitations will increase significantly. For example, there are approximately 30 facilities with permits that contain mercury limitations or monitoring requirements. It is possible that between 180 to 1,300 facilities may eventually need mercury limitations. OWQ believes that many of these facilities will not be able to comply with their mercury limits. The compliance problem is based on the lack of economically viable end-of-pipe treatment options and the ubiquitousness of mercury in the environment.

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## A Proposed Approach

One legal mechanism available to NPDES permit holders that would provide some relief from being in non-compliance is to be granted a variance from the mercury WQBEL. However, the variance process can be resource and time intensive for the facility, the interested public, and OWQ. Processing hundreds of individual mercury variances individually will detract from other important work by permit holders, the public and IDEM. Therefore, the proposed approach is to make available to affected permittees a streamlined process for them to obtain a mercury "variance" by rule contingent upon implementation of all practical efforts to minimize or prevent mercury pollution from their facilities. EPA's Region V has been receptive to this approach. This proposed approach requires rulemaking.

The goal of this aspect of the rulemaking effort is to revise the variance rules to provide a state-wide mercury variance that includes pollution minimization requirements to facilitate compliance for affected facilities and to foster mercury reduction efforts.

## Previous Rulemaking Related Efforts

IDEM developed draft rule language related to a state-wide mercury variance in 1999 and proceeded to a Second Notice comment period in March 1999. However, this effort stalled and the draft rule was withdrawn in May 2001. Nonetheless, the then proposed rule could be used as the starting point to this current effort.

In the Second Notice, the mercury variance process was envisioned to require the permittee to submit to the commissioner an application for a variance that includes:

- A certification that the discharger intends to be subject to the terms of the state-wide variance.
- A description of measures taken to date for mercury reduction or elimination.
- A plan of study for the identification and evaluation of potential mercury sources and potential methods for reducing and/or eliminating mercury from the permittee's effluent (i.e. pollution minimization).
- An explanation of the permittee's basis for concluding that there are no readily available means of complying with the mercury WQBEL without construction of end-of-pipe controls.

Due to the high priority placed on this rulemaking, a First Notice of Rulemaking for "Development of a New Rule Concerning Statewide Mercury Variance" was published in the June 1, 2002, Indiana Register.

## Project Objectives

The objectives of this project are: 1) to develop the appropriate policy for implementing mercury requirements in NPDES permits and 2) to develop appropriate rulemaking language and obtain an effective revised rule as soon as possible. All team members should have a clear role in helping to meet project objectives.

## Project Team

Initially, the following individuals integrate the project team. However, as the project proceeds, additional team member may be added (in consultation with the individuals below and/or the Triennial Review Steering Committee) to provide all necessary areas of expertise to the workgroup. The following team members are committed to attend all workgroup and Triennial Review Steering Committee meetings to ensure continuity of the discussions and success of the previously identified project objectives on a timely manner. In addition, workgroup members are committed (time permitting) to participate in all other public outreach forums related to the Triennial Review process as identified by the Triennial Review Steering Committee and to further reach out during the public participation phase of this workgroup's specific project.

**Jon Mangles** (317-233-5963) [jmangles@dem.state.in.us](mailto:jmangles@dem.state.in.us), IDEM Workgroup Facilitator

**John Donellan** (317-234-0865) [jdonellan@dem.state.in.us](mailto:jdonellan@dem.state.in.us), IDEM Assistant Workgroup Facilitator

**Larry Wu** (317-234-1805) [lwu@dem.state.in.us](mailto:lwu@dem.state.in.us), IDEM Public Participation Coordinator

**John Chavez** (317-327-2237) [jchavez@indygov.org](mailto:jchavez@indygov.org), Local Government Representative

**Charlotte Read** (219-879-3937) [char@savedunes.org](mailto:char@savedunes.org), Public Interest Sector Representative

**Paula Yeager** (317-571-1223) [iwf@indy.net](mailto:iwf@indy.net), Public Interest Sector Representative

**Tim Lohner** (614-223-1255) [twlohner@aep.com](mailto:twlohner@aep.com), Industry Representative

**Bob Johnston** (219-399-4194) [robert.johnston@ispat.com](mailto:robert.johnston@ispat.com), Chamber of Commerce (GLI) Representative

**Kevin Hoge** (219-647-5242) [kehoge@nisource.com](mailto:kehoge@nisource.com), Private Interest Sector Representative (Nisource)

**Eric Fry** (812-424-9000) [efry@bbcoal.com](mailto:efry@bbcoal.com), Private Interest Sector Representative Representative (B B Coal)

**Marty Risch** (317-290-3333) [mrrisch@usgs.gov](mailto:mrrisch@usgs.gov), USGS Water Quality Data Representative

**David Pfeifer** (312-353-9024) [Pfeifer.david@epamail.epa.gov](mailto:Pfeifer.david@epamail.epa.gov), EPA Representative

**Morris Beaton** (312-353-0850) [Beaton.Morris@epamail.epa.gov](mailto:Beaton.Morris@epamail.epa.gov), EPA REpresentative

US Fish and Wildlife Service (participation requested, but not confirmed)

1 Independent Technical Expert (CEI? IWPCA?)

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## Communications

The project team is free to contact each other for information or clarifications. Email is an effective way to exchange information and resolve issues involving several project team members. Team members should copy the IDEM workgroup facilitator on all email messages and other correspondence. All communications related to project scope and schedule should involve the IDEM workgroup facilitator and the IDEM Public Participation Coordinator, simultaneously. The IDEM facilitator is responsible for forwarding and/or copying all communications and documents to the IDEM Chief of the Rules Section who will maintain a file of all written materials, including communications and Meeting Summaries, related to this project.

A recorder, designated on a rotational basis at the beginning of each meeting, will record all team meetings, and will prepare Meeting Summaries. These Meeting Summaries are not expected to contain verbatim recording of the discussions, but rather a summary of the main points discussed, agreements, disagreements and action items. At the end of each meeting, the designated recorder shall go over his/her notes to clarify these items. The designated recorder shall submit a draft written meeting summary via email to all meeting participants within 2 working days after conclusion of the meeting. Meeting participants are expected to provide to the recorder comments to draft meeting summaries within 2 working days upon receipt of the draft summary to the designated meeting recorder for consideration of corrections, clarifications, etc. In turn, the designated meeting recorder shall submit final meeting summaries to the above team members within 8 working days upon conclusion of the meeting.

## Project Scope

Seven tasks have been identified for this project:

- Identification of team members, their roles and responsibilities, and determination and clarification of team operating guidelines (i.e. communications, decisions and resolving conflicts).
- Project Endorsement
- Identification of research background needs and preparation of background research reports
- Discussion of background research reports and development of document of current understanding of background information
- Formulation of recommendation for appropriate policy and identification of key elements necessary for the next task
- Development of rule language
- Public participation and technical assistance to rulemaking effort

The following describes the project work breakdown structure:

### **Task 1- Identification of team members and determination of team operating guidelines needs**

Task Manager: Jon Mangles

The goal of this task is to charter the most qualified team representing key public interest groups that responded to the First Notice published in the Indiana Register on June 1, 2002 and/or to outreach efforts via notification of the triennial effort from Tim Method on July 22, 2002.

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**Subtask 1.1 - Kick-off meeting.** Task 1 includes a project kick-off meeting scheduled on September 11<sup>th</sup> with key stakeholder representatives Charlotte Read, Jon Mangles, John Chavez, Bob Johnston and Tim Lohner. During this meeting the project workplan will be discussed and additional team members will be identified.

**Deliverables and Schedule:**

- First Technical Workgroup meeting (kick-off meeting) (9-11-02)
- Second version of workplan (9-19-02)
- First version of operating guidelines (9-30-02)

**Subtask 1.2 - Redefinition of workplan and document operating guidelines.** It is expected that a second version of the workplan and a first version of the operating guidelines will be provided to all team members prior to the second technical workgroup meeting, and that both documents will be further redefined upon participation of all the team members at the second meeting.

**Deliverables and Schedule:**

- 2<sup>nd</sup> Technical Workgroup meeting (10-3-02)

**Subtask 1.3 – Completion of workplan and operating guidelines.** At second meeting, all team members will discuss the workplan and operating guidelines for completion at this second meeting. Roles and responsibilities will be assigned to each team member. The IDEM facilitator will compile comments to prepare a final version of the workplan and the operating guidelines.

**Deliverables and Schedule:**

- Final version of workplan (11-7-02)
- Final version of operating guidelines (11-7-02)

## **Task 2- Project Endorsement**

Task Manager: Jon Mangles

The goal of this task is to gain the team's approval and support of the project to keep the project moving forward. It means that each team member will commit to fully support the project, accept his/her roles and responsibilities, and acknowledge the interdependence that he/she have to the overall team and the project objectives.

**Deliverables and Schedule:**

- Structured walkthrough of the final version of the workplan and operating guidelines (3<sup>rd</sup> Meeting) (11-21-02)
- Team members formal endorsement of the project (11-21-02)

## **Task 3- Identification of Background Research Needs and Preparation of Background Research Reports**

Task Manager: TBA

The goal of this task is to clearly identify specific technical background to be reviewed by the team, such as review of water quality data, current cost of mercury removal at end-of-pipe, pollution minimization effectiveness, approaches taken by other states to a state-wide mercury variance, current removal efficiency by conventional wastewater treatment technologies, previously proposed rule language, comments to first notice, etc. Team members will volunteer to research specific items and prepare summary reports of their literature research prior to the next meeting.

**Deliverables and Schedule:**

- 4<sup>th</sup> Technical Workgroup meeting (1-8-03)
- Assignments for background research to team members (1-8-03)
- Literature research summary reports to team members (2-7-03)

**Task 4- Discussion of background research reports and development of document of current understanding of background information) <sup>1</sup>**

Task Manager: TBA

The information collected in Task 3 above will be discussed and used to develop a concise technical document that provides the team's current understanding of the identified background information

**Deliverables and Schedule:**

- 5<sup>th</sup> Technical Workgroup meeting (all-day workshop) (2-20-03)
- 6<sup>th</sup> Technical Workgroup meeting and development of document of current understanding of issue (all-day workshop) (3-19-03)
- Document completion to Triennial Review Steering Committee (no later than end of March)

**Task 5- Formulation of recommendation for appropriate policy and identification of key elements necessary for next task**

Task Manager: TBA

The team's current understanding of the background information will be used to formulate a recommendation for a policy to undertake in the next task (i.e. rulemaking for a statewide variance or any other preferred option)

**Subtask 5.1 - Formulation of recommendation.** During this subtask, the workgroup will make a recommendation to the Triennial Review Steering Committee for appropriate policy.

**Deliverables and Schedule:**

- 7<sup>th</sup> Technical Workgroup meeting (all-day workshop) (4-23-03)
- 8<sup>th</sup> Technical Workgroup meeting (all-day workshop) (5-21-03)
- Recommendation to Triennial Review Steering Committee (no later than end of May)

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<sup>1</sup> Upon completion of Task 5, if another option different than a state-wide variance has been identified and agreed on, this workplan will be modified to reflect either a revised rulemaking or the absence of a rulemaking effort.

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**Subtask 5.2 - Identification of key elements necessary for next task.** During this subtask, the workgroup will identify the key elements necessary to proceed with the next task.

**Deliverables and Schedule:**

- 9<sup>th</sup> Technical Workgroup meeting (all-day workshop) (6-25-03)
- Document that identifies the key elements necessary for the next task (6-30-03)

**Task 6- Development of Rule Language (Assumes a statewide variance is the recommended policy)**

Task Manager: Jon Mangles

The information collected in Tasks 4 and 5 will be used to develop rule language. The Task Manager in cooperation with the Public Participation Representative will prepare the first draft of the rule language, prior to the next meeting. The draft rule language will be circulated among team members and comments will be obtained during the next two workgroup meetings. During this time, the rule language will be presented and discussed with the Triennial Review Steering Group in parallel forums, and with the public, as necessary.

**Deliverables and Schedule:**

- 10<sup>th</sup> Technical Workgroup meetings (all-day workshop) (7-22-03)
- 11<sup>th</sup> Technical Workgroup meeting (all-day workshop) (8-20-03)

**Task 7- Public Participation and Rule Finalization <sup>2</sup>**

Task Manager: Larry Wu

**Subtask 7.1 - Second Notice.** A second notice to this rulemaking will be published in the Indiana register, followed by a 60-day comment day period.

**Deliverables and Schedule:**

- Publication of a Second Notice with notification of date of Preliminary Adoption Public Hearing in the Indiana Register (10-1-03)

**Subtask 7.2 - Summary and Response to Comments of the Second Notice**

**Deliverables and Schedule:**

- Summary and response to comments of the Second Notice (12-31-03)
- Potential Public Meeting (TBA)

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<sup>2</sup> Target dates in Task 7 may change depending on public participation and WPCB requirements

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### **Subtask 7.3 – Preliminary Adoption Public Hearing and Preparation for Final Adoption**

#### **Deliverables and Schedule:**

- Preliminary Adoption Public Hearing (3-12-04)
- Publication of preliminarily adopted rule in the Indiana Register (6-1-04)(21-day third comment period ends 5-22-04)
- Package preparation due for Final Adoption Hearing with WPCB (8-25-04)

### **Subtask 7.4 - Final Adoption Hearing and Final Publication in Indiana Register.**

#### **Deliverables and Schedule:**

- Final Adoption Hearing with WPCB (9-10-04)
- Promulgation packet due to Attorney General Office (10-15-04)
- Promulgation packet due to Governor's Office (12-15-04)
- Publication of final rule in Indiana Register (no later than 2-01-05)